REMARKS/DISCUSSION OF ISSUES

Claims 3-8 are pending in this application, with Claim 3 being amended. No new matter is added.

Rejections under 35 U.S.C. § 112

Claims 3-8 are rejected as failing to comply with the written description requirement, and in particular, that there is no support in the specification for the limitation "said intermediate layer is oriented in the same plane as said bulk LC material." Claim 3 is amended to add the phrase "when in an unbiased state" to properly describe the orientation of the intermediate layer. Support is found in Fig. 3, which shows the orientation of the intermediate layer in the biased state. It would be evident to one of ordinary skill in the art that the orientation of the intermediate layer in the unbiased state would have to be oriented in the same plane as the bulk LC material to (1) develop the bias lines as shown in Fig. 3, and (2) provide the desired fast response without concomitant reduction of contrast (specification, page 5, lines 13-16). It is thus suggested that the rejection for lack of written description is overcome, and reconsideration of the rejection of Claims 3-8 under U.S.C. § 112 is therefore respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 3-8 are rejected under U.S.C. § 103(a) over Hatano et al., U.S. Patent No. 6,320,629 in view of Kuzuhara et al., U.S. Published Application No. 2004/0080693. The rejection of the claims, as amended, is respectfully traversed.

In Hatano et al., layer 618 (Fig. 12) has an orientation that is orthogonal to the LC layer 621. In other words, these layers are crossed. The function of layer 618 is to create a bright state where there is otherwise a dark state, and the orthogonal orientation is necessary for this to occur.

In the present invention, reflections are limited by having an intermediate layer that is oriented in the same plane as the LC bulk material when the LC cell is in an unbiased state. As explained in the specification (page 5, line 13 to page 6, line 21), by creating this intermediate layer, and ensuring that the intermediate layer has an ordinary index of refraction and an

extraordinary index of refraction that are the same as the corresponding indices of the bulk LC material, combination of the intermediate layer and the boundary layer of the LC bulk material adjacent to the intermediate layer forms a net isotropic stack.

These claimed limitations are not disclosed in Hatano et al. Applicant respectfully suggests that Kuzuhara et al. does not provide all the limitations that Hatano et al. lacks. In particular, Kuzuhara et al. does not disclose that the intermediate layer has an ordinary index of refraction and an extraordinary index of refraction that are the same as the corresponding indices of the bulk LC material, nor does it disclose that the combination of the intermediate layer and the boundary layer of the LC bulk material adjacent to the intermediate layer forms a net isotropic stack. Thus, combining the references as suggested by the examiner does not yield the claimed limitations that are now in Claim 3. MPEP § 2143.

Applicant also respectfully suggests that the references cannot be combined as stated by the examiner. MPEP § 2143.01 requires that the proposed modification not render the prior art unsatisfactory for its intended purpose. Replacing the orthogonal layer of Hatano et al. with the layer of Kuzuhara et al. as suggested by the examiner would make the Hatano et al. device unworkable, because, as stated above, the orthogonality of the layer in Hatano et al. is necessary for the device to work.

In addition, while Hatano et al. describes an ECB (electrically controlled birefringence) LC cell, Kuzuhara et al. describes a TN (twisted nematic) LC cell. These are disparate technologies that typically cannot be combined with each other. MPEP § 2141.01(a).

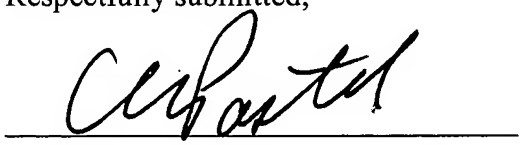
Thus, Applicant presents three arguments to the examiner. First, combining the cited references does not produce the claimed invention. Second, combining the references renders the prior art unsatisfactory for its intended purpose. Third, the ECB and TN technologies are disparate technologies which should be considered non-analogous art for obviousness purposes.

It is therefore respectfully suggested that the rejection of independent Claim 3 is overcome. Claims 4-8, being dependent upon and further defining independent Claim 3, should be allowable for that reason, as well as for the additional recitations they contain.

Reconsideration of the rejection of Claims 3-8 under U.S.C. § 103(a) is therefore respectfully requested.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact Mr. Eric M. Bram (not the undersigned) at (914) 333-9635.

Respectfully submitted,



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